Derb Silt Loam 82-ID-0560 (82ID-009-5)

Classification: medial-skeletal Entic Cryandepts.

General Site Characteristics

Location: Benewah County, Idaho; approx. 4 1/2 miles SE of St. Maries, Idaho; 75 feet W & 1225 feet S of NE corner of sec. 7, T. 45N., R. 1W.
Forest:
Area: Along Thorn Creek near Highway 3
Described By/Date: Soil Conservation Service personnel on April 20, 1982
Parent Rock/Material: ash over hard fractured basalt.
Habitat Type: western hemlock, western red cedar, grand fir, Douglass Fir, goldthread, moss (very little).
Topography: very steep
Landform: basalt escarpment
Weathering:
Formation Name:
Slope: 65 percent
Aspect: north 14 degrees
Elevation: 2720 feet
Soil Depth:
Eff. Rooting Depth:
Litter Type:
Surface Rock: 10-20 ft. apart

Climate:
Precipitation: 30 inches
Erosion:
Infiltration:
Permeability: moderate
Storage:
Drainage: well
Air Temp:
Soil Temp at 20 inches: 36 deg. F
Salt/Alkali:

Remarks: 34 inches to hard fractured basalt (lithic)

Pedon Description

Oi 6-3 cm. Slightly decomposed needles, twigs, and moss.

Oe 3-0 cm. Well decomposed organic matter with Mt. St. Helen's (May 1980) in between.

A 0-8 cm. Brown (7.5YR 5/4) silt loam, dark brown (7.5YR 3/4) moist; weak very fine and fine granular structure; loose, very friable, nonsticky and slightly plastic; moderately acid pH 5.8; common very fine, fine, medium, and coarse roots; many very fine and fine, few medium tubular pores; 25 percent gravels by weight; common fine and medium pieces of charcoal; clear wavy boundary.

82-ID-0560 (continued)

Bs1 8-33 cm. Brown (7.5YR 5/4) gravelly silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure; loose, very friable, nonsticky and slightly plastic; moderately acid pH 5.8; common very fine, fine, medium, and coarse roots; many very fine and fine, few medium tubular pores; 29 percent gravels by weight; clear wavy boundary.

Bs2 33-66 cm. Light brown (7.5YR 6/4) gravelly loam, brown to dark brown (7.5YR 4/4) moist; weak medium and coarse subangular blocky structure; loose, very friable, nonsticky and slightly plastic; moderately acid pH 5.6; few very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; 51 percent gravels by weight; clear wavy boundary.

Bs3 66-86 cm. Light brown (7.5YR 6/4) gravelly silt loam, brown to dark brown (7.5YR 4/4) moist; weak medium and coarse subangular blocky structure; loose, friable, nonsticky and slightly plastic; moderately acid pH 5.6; few very fine, fine, and medium roots; common very fine, few fine tubular pores; 44 percent gravels by weight; gradual wavy boundary.

R 86+ cm. Hard fractured basalt.

Bs A special volcanic ash sample near Derb. Laboratory data is included with this profile.

Pedon: Dorb Silt Loam 82-ID-0560 (82ID-009-5) Date: June 1984

Sample No.	Horizon	Depth	pH paste	EC*10^3	% Water at Saturation	Available P	Sesquioxides				Spodic
							Di-Citrate Fe	Extract Al	Pyrophosphate Fe	Extract Al	
		cm		mmhos/cm		ppm	%				
	Oi	6- 3	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Oe	3- 0	NS	NS	NS	NS	NS	NS	NS	NS	NS
1	A	0- 8	5.8	0.53	53	3.6	2.20	0.53	0.26	0.37	no
2	Bs1	8-33	5.8	0.29	52	3.4	2.80	0.53	0.14	0.25	no
3	Bs2	33-66	5.6	0.19	37	1.9	3.41	0.23	0.07	0.07	no
4	Bs3	66-86	5.6	0.19	40	1.6	3.16	0.26	0.07	0.07	no
	R	86+	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ash	Bs		5.8	0.26	86	10.2	1.07	0.53	0.18	0.40	no

Sample No.	Exchangeable Ions				Ext. Acidity	CEC	Base	OM	OC	N	C:N	Soil	
	Ca	Mg	Na	K	H		Saturation					Fraction	NaF pH
	meq/100 gms						%	%			ratio		
	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1	8.5	1.3	0.6	1.3	17.7	24.0	40	4.02	2.34	0.123	19	0.75	10.2
2	7.3	1.3	0.6	0.9	15.6	21.2	39	1.69	0.98	0.072	14	0.71	10.1
3	11.9	2.0	0.6	0.5	11.4	22.8	57	0.77	0.45	0.035	13	0.49	9.8
4	10.5	1.8	0.6	0.5	11.2	20.1	54	0.74	0.43	0.035	12	0.56	9.2
	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ash	4.1	0.5	0.2	0.7	20.1	18.7	22	4.91	2.85	0.123	23	1.00	10.7

Remarks: CEC's were leached with 10% acidified NaCl.
CEC's and nitrogens were run by steam distillation.
Extractable cations were run on the Jarrell Ash atomic absorption.
NS - no sample

Analysis by: Debbie Eisinger

Pedon: Dorb Silt Loam 82-ID-0560 (82ID-009-5) Date: May 1984

	Particle Size Distribution (mm)								Gravel & Stone		
Depth	VCS	CS	MS	FS	VFS	TS	TSi	TC	>2 mm		Textural
	2-1.0	1-0.5	0.5-0.25	0.25-0.1	0.1-0.05	2-0.05	0.05-0.002	<0.002	wt.	vol.	Classes
cm	%								%		
6- 3	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS
3- 0	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS
0- 8	4.26	5.49	3.10	5.55	6.90	25.32	59.96	14.73	25		Silt loam
8-33	3.57	6.31	3.16	5.42	7.31	25.76	59.96	14.28	29		Gravelly Silt loam
33-66	4.29	9.12	6.43	10.86	9.74	40.44	48.00	11.55	51		Gravelly loam
66-86	2.60	5.75	4.28	8.49	8.51	29.64	57.52	12.84	44		Gravelly silt loam
86+	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS
Ash	0.40	0.63	0.56	2.30	10.66	14.56	75.14	10.30	none		Silt loam

	Silt Size Distribution (mm)					Water Content		Liquid	Plastic	Plastic
Depth	CoSi	Msi	Fsi	Bulk Density		1/3	15	Limit	Limit	Index
	0.05-0.02	0.02-0.005	0.005-0.002	Clod	Core	Bar	Bar			
cm	%			g/cc		%		%		
6- 3						NS	NS			
3- 0						NS	NS			
0- 8						37.9	27.9			
8-33						39.0	23.2			
33-66						30.1	19.8			
66-86						32.3	20.0			
86+						NS	NS			
Ash						51.4	30.7			

Remarks: Samples were run by the centrifuge method, 5% sodium hexametaphosphate added, sonified, and carbonates were not removed.
NS - no sample

Analysis by: Anita L. Falen